Name:

Date:

1. List three **categorical variables**: (2pts each)
2. List three **values** of the categorical variable, “Baseball Teams”. (2pts each)
3. Grade level is not a categorical variable, even though it is a number. Why not? (3pts)
4. Bars in a bar graph can be in any order. Why is this so? (3pts)

Ms. Raskin conducted a survey of students and asked them what their dominant hand is and if they prefer to type or write with a pen. Here are the results.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Right-Handed | Left-Handed | **Total** |
| Prefer to write | 32 | 22 | **54** |
| Prefer to type | 18 | 16 | **34** |
| **Total** | **50** | **38** | **88** |

1. Identify the **variables** in the table:   
   (2pts each)
2. What are the **values** for the variable, “dominant hand”?   
   (1pt each)
3. Make a labeled Venn Diagram to show the data in the table. (5pts)
4. Make a side-by-side bar graph to show the data in the table. (6pts)
5. Are “dominant hand” and “writing/typing preference” independent? Explain why or why not. Use data to support your claim. (5pts)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Takes a History Class** | |  |
|  |  | Yes | No | **Total** |
| **Advisor** | Clausen | 5 | 7 | **14** |
| Jesseman | 2 | 12 | **14** |
| Porcelli | 10 | 4 | **14** |
| Raskin | 5 | 9 | **14** |
| Seid | 4 | 9 | **13** |
| Stouder | 6 | 2 | **8** |
|  | **Total** | **32** | **43** | **77** |

The table below shows made-up data for the 77 seniors at Washington Latin.

1. What percent of students are in Mr. Porcelli’s advisory? (3pts)
2. What percent of students take a history class, given that they are in Mr. Porcelli’s advisory? (3pts)
3. Are the events, “in Mr. Porcelli’s advisory” and “takes a history class” independent? (5pts)
4. Make a side-by-side bar graph to show the data in the table. (6pts)
5. Find the following percents: (3pts each)
   1. 22% of 168
   2. 176% of what number is 56?
   3. What percent of 24 is 10?